UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,320	05/10/2007	Noriaki Kato	868_012	4731

25191 7590 09/11/2008

BURR & BROWN
PO BOX 7068
SYRACUSE, NY 13261-7068

EXAMINER	
WESTERBERG, NISSA M	
ART UNIT	PAPER NUMBER
1618	
MAIL DATE	DELIVERY MODE
09/11/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/587,320	KATO ET AL.	
	Examiner	Art Unit	
	Nissa M. Westerberg	1618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 July 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10 - 14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10 - 14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicants' arguments, filed July 16, 2008, have been fully considered but they are not deemed to be fully persuasive. The following rejections and/or objections constitute the complete set presently being applied to the instant application.

Response to Rule 1.132 Declaration

1. The declaration under 37 CFR 1.132 filed July 16, 2008 is insufficient to overcome the rejection of claims 10 – 14 under 35 U.S.C. 103(a) based upon Masahiko Akita (Acta med Okayama 1993) in view of Lopes de Faria et al. (Acta Opthalmol Scand 1999) as set forth in the last Office action because: it is not a comparison with the closest prior art and the declaration is not commensurate in scope with the claims. The declaration presents results of treatment of streptozotocin (STZ) induced diabetic crab eating monkeys following retinal ischemia caused by an increase in intraocular pressure with either epalrestat or SNK-860, the compound of claim 12. The claims of the instant invention are drawn to any mammal. The results presented in Mashiko Akita are in a rat model in which diabetes was also induced using STZ and treated with SNK-860 but no increase in intraocular pressure was performed. These arguments will be furthered developed below in discussing the contents of the declaration as well as Applicants arguments in regards to the rejection under 35 U.S.C. 103.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 10 – 14 were rejected under 35 U.S.C. 103(a) as being unpatentable over Masahiko Akita (Acta med Okayama 1993) in view of Lopes de Faria et al. (Acta Opthalmol Scand 1999). This rejection is MAINTAINED for the reasons of record set forth in the Office Action mailed March 18, 2008 and those set forth below.

Applicants traverse this rejection on the basis that there are two different forms of macular edema – diffuse and focal. These two forms are different from each other pathologically, therapeutically and in view of the risk factors. The primary reference, Akita, in which STZ-induced diabetes in rats were administered SNK-860 showed the development of microaneurysms, indicating that these mice developed focal macular edema and not the diffuse form. The secondary reference, Lopes de Faria, describes that focal and diffuse edema are different and that treatments such as laser photocoagulation is less efficient for diffuse macular edema in comparison to focal edema, indicating that each edema has different etiologies. Retinopathy is understood to be different from maculopathy (macular edema) histogenetically and functional. Thus, macular edema is not retinopathy so that medical agents for diabetic retinopathy are different from those for diabetic maculopathy. The applicants used an ischemia-reperfusion induced injury model in rats and monkeys as experimental models, which caused an inflammatory reaction in the eye closely related to diffuse edema . As the art express considerable skepticism that aldose reductase inhibitors were effective just in experimental animal model of DR but the efficacy was not observed in DR of clinical trials, one skilled in the art could not have predicted that SNK-860 inhibited the diffuse

macular edema. Also submitted is additional evidence from STZ induced diabetic crab eating monkeys with increased ocular pressure.

These arguments are not found to be persuasive. The claims are not limited to a particular kind of macular edema, either diffuse or focal, and as indicated by Applicant on p 1, ¶ 3, maculopathy includes macular edema, ischemic maculopathy, retinal pigment epitheliopathy and macular traction. Maculopathy is defined as any pathological condition or disease of the macula, the small spot in the retina where vision is keenest and can also be called macular retinopathy (maculopathy definition from medicinenet.com, accessed 9/2/08). Applicants have not presented the results of experiments in which the increased intraocular pressure step was not carried out but diabetes was induced by the administration of STZ to the test subjects as was done in Akito et al.

The claims are not limited only to humans but only to “mammals”, which encompasses rats. Therefore, whether the treatment is effective in an experimental animal model but not in clinical trials is not relevant. The clinical trials which applicant report in monkeys could be considered by some to be an experimental animal model and not a trial of the medicine humans with diabetes. The experiments in Akito were carried out in rats in which diabetes was induced by STZ, identical to the method used by Applicant to cause diabetes in the test subjects although an increase in intraocular pressure sufficient to cause ischemia was not carried out. Akito et al. states that microaneurysms occurred in STZ-diabetic rats but not in the SNK-860 treated diabetic rats or controls so SNK-860 is effective in the treatment of focal macular edema. As

shown in figures 2 and 3 of Akita et al., the morphology of the retina in controls and SNK-860 treated STZ-diabetic rats are almost identical. Given the evidence of Akita et al. as to the almost normal structure of the retina that is caused by SNK-860, the compound claimed by Applicant, it is the position of the Examiner that one of ordinary skill in the art at the time of the instant invention would have known and appreciated that SNK-860 can be used in the treatment of pathologic conditions of the macula in mammals suffering from diabetes. Therefore, this rejection is MAINTAINED.

Specification

6. The disclosure is objected to because of the following informalities: on p 17, ¶ 3 of the amended specification, an apparent typographical error is present in the line "is considered difficult tot reat."

Appropriate correction is required.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nissa M. Westerberg whose telephone number is (571)270-3532. The examiner can normally be reached on M - F, 8:00 a.m. - 4 p.m. ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Hartley can be reached on (571) 272-0616. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael G. Hartley/
Supervisory Patent Examiner, Art Unit 1618

NMW